UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,073	10/31/2001	Larry J. Shaffer	4366-53	3593

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EXAMINER
TRUONG, CAMQUY

ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The *MAILING DATE* of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10/31/01</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-29</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-29</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. Claims 1-29 are presented for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-14 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following claim language is indefinite:

i. As per claim 1, it is not clearly understood what the is different between a maximum computer platform load and a maximum resource load (if they are the same, then such should be indicated by using the same term).

ii. As to claim 16, it is not clearly understood what is meant by the phase " assigning said first task... capability of said first computer processor".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-12, 14-27 and 29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hsu (U.S. Patent 6,104,721).

6.   As to claim 1, Hsu teaches the invention substantially as claimed including

method of:

Assigning a maximum computer resource load to each of a plurality of

computer platforms, wherein a first of said computer platforms has a first

maximum computer platform load and a second of said computer platforms has a

second maximum resource load (col. 3, lines 5-8 and lines 17-20; col. 9, lines 60-

62; col.10, line 54-col.11, line 7; col. 10, lines 24-27);

Assigning a computer resource requirement to a task (col. 2, lines 48-51;

col. 3, lines 43-45; col.5, lines 57-59; col.6, lines 3-5 and lines 14-18);

Assigning said task to a selected one of said plurality of computer

platforms (col. 3, lines 20-22, lines 32-35 and lines 45-52; col.6, 30-32; col. 10,

lines 11-14; col. 13, lines 37-42); and

Performing said task in connection with said selected computer platform

(col.6, lines 26-32; col. 13, lines 43-46).

7.   Hsu does not explicitly teach that his method is dynamically allocating

task. However, Hsu teaches dynamically allocating communication processing

resources used to process tasks specified by call setup requests (col. 1, lines 10-

12). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to have included the capability of dynamically allocating task

in Hsu's system because it would provide more efficient management style to

Hsu system by dynamically allocating both the resource and task in the same

system.

8.   As to claims 15 and 16, it is rejected for the same reason as claim 1. In

addition, Hsu teaches:

       Dynamically specifying a first capability of a first computer processor (col.

2, lines 40-42; col. 3, lines 7-8 and lines 17-19; col. 14, lines 33-49);

       Receiving a first task requiring processing, wherein a first processor load

value is associated with said first task (col. 6, lines 12-18; col.12, line 65-col. 13,

line 5);

       Assigning said first task to said first computer processor (col. 3, lines 20-

22, lines 32-35 and lines 45-52; col.6, 30-32; col. 10, lines 11-14; col. 13, lines

37-42; and

       Processing said first task using said first computer processor (col.6, lines

26-32; col. 13, lines 43-46).

9.   As to claim 22, Hsu teaches at least a first computer platform comprising

at least a first computer resource (col. 3, lines 17-19), wherein said at least a first

computer platform has a task type capability and a resource amount capability

(col. 3, lines 20-27);

Processing software running on a server processor, comprising: a software task allocation unit (col. 3, lines 38-40; col. 9, lines 20-22), wherein a task is completed in connection with a computer platform having a task type capability required to complete said task and a resource amount capability sufficient to complete said task (col. 3, lines 40-46; col. 10, lines 36-41).

10.   As to claim 2, Hsu teaches first computer platform load is not equal said second computer resource load (col. 3, lines 5-8 and lines 17-20; col. 9, lines 60-62; col.10, line 54-col.11, line 7; col. 10, lines 24-27).

11.   As to claim 3, Hsu teach assigning a computer resource requirement comprises assigning a point value to said task (col. 2, lines 48-51; col. 3, lines 43-45; col.5, lines 57-59; col.6, lines 3-5 and lines 14-18).

12.   As to claim 4, Hsu teach providing a computer resources table, wherein indications of maximum computer resource loads for each of said plurality of computer platforms is maintained in said table (col.9, lines 60-62; col. 10, lines 24-27).

13.   As to claim 5, Hsu teaches each of said plurality of computer resources reports a maximum computer resource load amount to said table prior to said step of assigning a task (col. 10, lines 32-35).

14.   As to claim 6, Hsu teaches a task is not assigned to a computer platform if doing so would cause said indication of a computer resource load amount of said computer platform to exceed a maximum computer resource load associated with said computer platform (col. 10, lines 42-43; col. 13, lines 6-12).

15.   As to claim 7, Hsu teaches first computer platform is assigned said task, wherein a maximum computer resource amount associated with said computer platform is exceeded, and wherein said first computer resource rejects said assigned task (col. 9, lines 54-56; col. 10, lines 42-43; col. 13, lines 6-12).

16.   As to claim 8, Hsu teaches task is assigned to said second computer platform after said rejection of said task by said first computer platform (col. 10, lines 42-47; col. 13, lines 17-22).

17.   As to claim 9, Hsu teaches classifying said task by type (col. 3, lines 35-36).

18.   As to claim 10, Hsu teaches providing a computer resources table, wherein an indication of a computing resource load and of a task capability for each of said plurality of computer platforms is maintained in said table (Fig.3; Fig. 4; col. 3, lines 17-37; col. 9, lines 31-46).

19.   As to claim 11, Hsu teaches task is assigned to a computer platform listed in said computer resources table according to said computing load and said task capability (col. 3, lines 17-37).

20.   As to claims 12 and 29, Hsu teaches wherein said computer platforms comprise at least one of a processor, an input/output port, an area of memory, and an allocation of bandwidth (col. 7, lines 8-12).

21.   As to claim 14, Hsu teaches altering at least one of said plurality of computer platforms, wherein said step of altering comprises at least one of adding, removing, and modifying said at least one computer resource associated with said computer platform (col. 3, lines 27-29; col. 6, lines 26-29 and col. 10, lines 25-30).

22.   As to claims 17-18 and 20, a computer processor capability table, wherein a dynamically adjusted first capability value for said first computer processor is stored (col. 3, lines 27-29; col. 6, lines 26-29 and col. 10, lines 25-30; col. 14, lines 33-49).

23.   As to claim 19, Hsu teaches specifying a task capability associated with said first computer processor and with a second computer processor, wherein a task of a first task type is assigned to a computer processor having a task capability including said first task type, and wherein a task of a first type is not assigned to a computer resource having a task capability that does not include a task of said first type (col. 9, lines 48-56).

24.   As to claim 20, Hsu teaches altering a performance characteristic of said first processor, wherein said step of dynamically specifying comprises respecifying a first capability of said first processor (col. 10, lines 30-31).

25.   As to claim 21, Hsu teaches altered performance characteristic comprises at least one of a frequency of operation, an operating voltage, and a rate of instructions (col. 15, liens 11-18).

26.   As to claim 23, Hsu teaches software task allocation unit further comprises: a software table, wherein an entry for said at least a first computer platform is maintained in said table, and wherein for each such entry a task type capability and a task resource amount are specified (col. 3, lines 17-37; col. 9, lines 31-37).

27.   As to claims 24-26, Hsu teaches task resource amount is dynamically altered in response to a change in a resource amount capability of said at least a first computer platform (col. 10, lines 30-36).

28.   As to claim 27, it is rejected for the same reason as claim 21.

Claim Rejections - 35 USC § 103

29.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

30.   Claims 13 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (U.S. Patent 6,104,721), as applied to claims 1 and claim 22 above, in view of Borkar et al (U.S. Patent 6,484,265 B2).

31.   As to claims 13 and 28, Hsu teaches:

Altering a clock rate of a computer resource associated with a computer platform included in said carrier (col.15, lines 11-16).

Hsu does not explicitly teach:

Sensing a temperature of a carrier associated with at least one of said computer platforms and altering a maximum load value of said computer platform, wherein a maximum load value of said computer platform is increased if said clock rate is increased, and wherein a maximum load value of said computer platform is decreased if said clock rate is decreased.

32.   However Borkar teaches sensing a temperature of a carrier associated with at least one of said computer platforms (col. 1, lines 15-18).

Altering a maximum load value of said computer platform, wherein a maximum load value of said computer platform is increased if said clock rate is increased, and wherein a maximum load value of said computer platform is decreased if said clock rate is decreased (col. 6, lines 16-39).

33.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hsu and Borkar because Borkar's Sensing a temperature of a carrier associated with at least one of said computer platforms and altering a maximum load value of said computer platform, wherein a maximum load value of said computer platform is increased if said clock rate is increased, and wherein a maximum load value of said computer platform is decreased if said clock rate is decreased would provide flexibility in order to extend the hardware lifetime of the circuit while meeting the challenges of increasing processing power requirements of new data services.

Conclusion

34.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Camquy Truong whose telephone number is (571) 272-3773. The examiner can normally be reached on 8AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3756.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

Camquy Truong

January 14, 2005

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